Abstract

We propose to survey the cross section for coincident cluster knockout, (e,e′X), where X denotes a deuteron, triton, ^{3}He, and ^{4}He. We hope to establish the systematic nature of these reactions, in particular their relative probabilities, their variation with momentum transfer and nuclear size, and their distribution in missing energy. We plan to concentrate on ^{12}C(e,e′X) with some study of Fe(e,e′X). We also propose to study the ^{12}C(e,e′d) reaction in greater detail by performing a Longitudinal/Transverse separation at $Q^2 = 1$ (GeV/c)^2 to examine the underlying reaction mechanism for the two body knockout process. We will simultaneously obtain data on ^{12}C(e,e′p) at large initial momenta ($p_i \approx q/2$).